

CLAIMS

1. A method of providing a node of a peer-to-peer network with access
5 to a resource located within the network comprising providing the node
with at least one link to the resource which is actuatable to connect the node
to the resource and the link having associated therewith information which
provides an action that the node using the link to access the resource should
perform if access to the resource should fail.
10
2. A method according to claim 1 in which the information provides at
least one link to an alternative resource which is actuatable to connect the
node to that alternative resource.
- 15 3. A method according to claim 1 or 2 in which the information
associated with the at least one link determines what defines failure of the
attempted access to the resource.
4. A method according to claim 3 in which failure of the attempted
20 access has at least one of the following definitions: failure to access the
resource within a predetermined time; access to the resource has a lower
performance than a predetermined performance measure.
5. A method according to claim 4 in which the predetermined
25 performance measure comprises a data transfer rate of the resource to the
node below a predetermined threshold.
6. A method according to any preceding claim in which the resource
comprises at least one of the following: a file; a program, processor cycles
30 of a processor; storage capacity.

7. A method according to any preceding claim in which the information provides a plurality of alternative actions that the node should perform should access fail.

5 8. A method according to claim 7 in which the alternative actions are performed one at a time to try and achieve access to the resource.

9. A method according to any preceding claim in which the information associated with a link provides load balancing of communications across
10 the network.

10. A method according to claim 10 in which the information associated with a link causes random or pseudo random connection to an alternative resource should access to access to the resource fail.

15

11. A node of a peer-to-peer network comprising a transceiver and a processing means, said transceiver being arranged to connect to the network and receive at least one link to a remote resource which is actuable to connect the node to the remote resource, the link having information
20 associated therewith said transceiver being arranged to pass said link and information to said processing means, said processing means being arranged to attempt to access a resource provided by said link using said transceiver and further arranged to monitor said transceiver during the attempted access, and the processing means being further arranged to carry
25 out an action provided by the information should the monitoring of the transceiver determine that access to the resource has failed.

12. A node according to claim 11 that is arranged to determine that access to the resource has failed if access does not occur within a
30 predetermined time.

13. A node according to claim 12 that is arranged to determine that access to the resource has failed if the access has a lower performance than a predetermined performance measure.

5 14. A peer-to-peer network comprising a plurality of nodes each capable of communicating with one another, said nodes being arranged to provide to one another links to resources within the network actuatable to connect a node to at least one of the resources the resource, said nodes being further arranged to associate with such links information which provides an action
10 that the node using the link should perform if access to the resource should fail.

15 15. A network according to claim 14 in which the resource comprises at least one of the following: a file, a program, processor cycles of a processor, storage capacity.

16. A network according to claim 14 or 15 in which one or more nodes are arranged to send information associated with a link that provides a plurality of alternative actions should access to a resource fail.

20 17. A network according to claim 16 in which one or more nodes are arranged to send information associated with a link that causes the node receiving the information to access an alternative resource should access to a resource fail.

25 18. A network according to any of claims 14 to 17 in which the information associated with a link is arranged to provide load balancing of the communications across the network.

30 19. A software agent for a node of a peer-to-peer network, the software agent being arranged to process information associated with a link, provided to the node, which is actuatable to connect the node to a resource

and the software agent being arranged to cause the node to perform an action should the link fail to provide access the resource.

20. A software agent according to claim 19 which is at least one of the following: a plug-in to an existing software agent; a script; an additional program.

21. A computer program which allows a node of a peer-to-peer network to receive at least one link actuable to connect the node to a remote resource on at least one other node of the network, the link having information associated therewith, the program allowing the node to attempt to access the remote resource provided by the link, and monitor progress of the attempted access, the program being further arranged to carry out an action provided by the information should monitoring of the attempted access determine that the access has failed.

22. A machine readable medium containing instructions which when read by a computing device cause that computing device to perform the method of any of claims 1 to 10.

20

23. A machine readable medium containing instructions which when read on to at least one node of a peer-to-peer network cause the network to function as the network of any of claims 14 to 18.

24. A machine readable medium containing instructions which when read on to a node of a peer-to-peer network cause that node to function according to any of claims 11 to 13.

25. A machine readable medium containing instructions which when read on to a computer cause that the software agent of claims 19 or 20 to be loaded onto the computer.

26. A machine readable medium containing instructions which when read on to a computer cause the computer program of claim 21 to be read onto the computer.

5 27. A method of providing a node of a peer-to-peer network with access to a resource substantially as described and as illustrated herein with reference to Figures 4 to 8 of the accompanying drawings.

28. A node of a peer-to-peer network substantially as described and as
10 illustrated herein with reference to Figures 4 to 8 of the accompanying drawings.

29. A peer-to-peer network substantially as described and as illustrated herein with reference to Figures 4 to 8 of the accompanying drawings.

15

30. A software agent substantially as described and as illustrated herein with reference to Figures 4 to 8 of the accompanying drawings.

31. A computer program substantially as described and as illustrated
20 herein with reference to Figures 4 to 8 of the accompanying drawings.